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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/199,604	11/25/1998	DAVID A. SOBESKI	MSFT117220	3888

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EXAMINER
COURTENAY III, ST JOHN

ART UNIT	PAPER NUMBER
2126	17

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PRG

Office Action Summary	Application No.	Applicant(s)	
	09/199,604	SOBESKI ET AL.	
	Examiner	Art Unit	
	St. John Courtenay III	2126	

-- The MAILING DATE of this communication appears on the c ver sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

ST. JOHN COURTENAY III
PRIMARY EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s).
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Amendment

Applicant's arguments and amendments have been carefully considered.

Again, the Examiner does not agree with Applicant's contention that Pugh does not disclose a single object having a plurality of dynamic behaviors.

Pugh explicitly discloses:

> *".. a composite object appears to a client of the composite object as a single object that exposes multiple interfaces"*[see col. 6, lines 65-66].

Furthermore, the cited Corkill reference discloses the use of dynamic objects that are not composite objects [see page 44, col. 2, e.g.,

> *"Dynamic, multiple inheritance allows developers to augment generic object classes with specialized application information."*

Applicant appears to acknowledge in remarks of record that the term "dynamic" is subject to a broad range of reasonable interpretations by those skilled in the art: e.g.,

> *"Clearly, Corkill's use of the term 'dynamic' to describe its objects illustrates an industry-wide abuse/overuse of the term 'dynamic' when referring to object-oriented objects and programming."* [see paper #16, last sentence of page 9, cont'd at the top of page 10 of the response].

The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. In re Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

Applicant has added by amendment the additional limitation that "the plurality of dynamic behaviors are defined behaviors of the object."

It is inherent that the plurality of dynamic behaviors are defined behaviors of the respective objects, as taught by both Pugh and Corkill. It is axiomatic that the disclosed dynamic behavior could not be realized if the respective dynamic behaviors were not defined in some manner. Hence, the claimed features *necessarily* flow from the teachings of the art. Ex Parte Levy, 17 USPQ2d 1461, 1464 (Board of Patent Appeals & Interferences, 1990).

With respect to the obviousness-type double patenting rejection, the Examiner has considered Applicant's arguments, but does not find them to be persuasive.

Specifically, Applicant appears to be arguing what the cited Sobeski reference describes within the specification. In passing upon questions of double patenting and restriction, it is the claimed subject matter that is considered and such claimed subject matter must be compared in order to determine the question of distinctness or independence.

Sobeski (U.S. Patent 6,304,879) claims BOTH static and dynamic object properties.

Accordingly, the Examiner maintains that the claims in the instant application define an invention that is merely an obvious variation of the invention claimed in co-pending application 09/200,674, now U.S. Patent 6,304,879 (Sobeski et al.). The rejection is maintained below.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*
>
> *Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same assignment to the same person.*

Claims 1 – 28 are rejected under 35 U.S.C. § 103 as being unpatentable over Pugh et al. (U.S. Patent 6,088,739) in view of Corkill, Daniel D., "The Dynamics of Modeling Change", AI & Objects, August 1996, pages 42-46.

As per independent claim 1:

Pugh teaches a system comprising:

- a single object having a plurality of dynamic behaviors [e.g., see "composite object" and the addition and deletion of associated role objects, as discussed beginning col. 5, lines 50-67, continued, col. 6; Pugh explicitly discloses: "*.. a composite object appears to a client of the composite object as a single object that exposes multiple interfaces*", col. 6, lines 65-66];

- a data store to store data regarding the plurality of dynamic behaviors [e.g., see "composite object" and its capability to

include (i.e., store) associated "role objects," see discussion beginning col. 6, line 3; see list and database discussion col. 14, beginning line 54].

However, **Pugh** does not *explicitly* disclose the following additional limitations:

Corkill teaches an application to instantiate the object from the data stored in the data store regarding the plurality of dynamic behaviors [see dynamic object discussion, page 44, see also: *"4. The application should change behavior"* and *"Automatic storage management decouples object management responsibility"*, page 44, 2nd column], wherein the object instantiates at least one of the plurality of dynamic behaviors [e.g., see "the ability to change classes at runtime is important to long-lived applications ...." page 44, col. 2; see entire "dynamic object" disclosure].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Pugh** by implementing the improvements detailed above because it would provide **Pugh's** system with an enhanced capability to dynamically modify collaborative integration applications so that particular features of a given application can be added, removed, or updated at runtime, i.e., **Corkill** explicitly discloses: *"The use of dynamic objects ... gives collaborative-integration applications the flexibility needed to operate efficiently in fast-paced, open, and dynamic environments"* [see page 46, col. 2, last paragraph].

It is inherent that the plurality of dynamic behaviors are defined behaviors of the respective objects, as taught by both Pugh and Corkill. It is axiomatic that the disclosed dynamic behavior could

not be realized if the respective dynamic behaviors were not defined in some manner.

As per claim 2:
Pugh, as modified by **Corkill**, teaches the data store is within the object [e.g., see Pugh "role object" discussion beginning col. 6, line 2].

As per claim 3:
Pugh, as modified by **Corkill**, teaches less than all of the plurality of dynamic behaviors of the object are instantiated [e.g., see Pugh "producer object" discussion beginning col. 13, line 63, and continued in col. 14] .

As per claim 4:
Pugh, as modified by **Corkill**, teaches the object determines at run-time which of the plurality of dynamic behaviors to instantiate [e.g., see Pugh "producer object" discussion beginning col. 14, line 6; see also the Corkill discussion in claim 1 above].

As per claim 5:
Pugh, as modified by **Corkill**, teaches the object comprises a Component Object Model (COM) object [e.g., see Pugh discussion beginning col. 14, line 8] .

As per claim 6:
Pugh, as modified by **Corkill**, teaches the plurality of dynamic behaviors comprises at least one selected from the group essentially consisting of: a plurality of objects, a plurality of methods, and a plurality of events [see "register-role", and associated discussion beginning col. 10, line 10; see also the Corkill discussion in claim 1 above, Corkill discusses events in col. 2, page 46].

As per claim 7:
Pugh, as modified by **Corkill**, teaches the data store comprises a registry [e.g., see "register_role" discussion beginning col. 11, line 66, col. 12, lines 59-67, cont'd col. 13; see also "registered properties" col. 14, line 34 and associated discussion; see also "register-role", and associated discussion beginning col. 10, line 10; see also the Corkill discussion in claim 1 above] .

As per claim 8:
Pugh, as modified by **Corkill**, teaches the plurality of dynamic behaviors comprises a plurality of system-defined behaviors and a plurality of application-defined behaviors [e.g., see "role object" discussion beginning col. 6, line 2, and "composite objects," as cited above in the previous rejections; see also the Corkill discussion in claim 1 above].

As per independent claim 9:
This claim is rejected for the same reasons detailed above in the rejection of independent claim 1, and also for the following additional reasons:

Pugh, as modified by **Corkill**, teaches a method comprising:

- receiving a command to instantiate an object having a plurality of dynamic behaviors [e.g., see "create an instance" discussion beginning col. 7, line 3 – a function call is equivalent to a command; see also the Corkill discussion in claim 1 above] .

- looking up data regarding the plurality of dynamic behaviors in a data store [see role list object" discussion , col. 8, beginning line 30; see also the Corkill discussion in claim 1 above]; and,

- instantiating the object from the data regarding the plurality of dynamic behaviors in the data store [e.g., see "create an instance" discussion beginning col. 7, line 3 see also the Corkill discussion in claim 1 above] .

As per claims 10-13:
Pugh, as modified by **Corkill**, teaches changing the plurality of dynamic behaviors [e.g., see "dynamically adds an interface to an object's list of supported interfaces" and associated discussion beginning col. 10, line 11; see also the Corkill discussion in claim 1 above].

As per claim 14:
Pugh, as modified by **Corkill**, teaches looking up data regarding the plurality of dynamic behaviors in the data store as have been changed [see role list object" discussion col. 8, beginning line 30]; and, instantiating the object from the data regarding the plurality of dynamic behaviors as have been changed stored in the data store [e.g., see "create an instance" discussion beginning col. 7, line 3; see also the Corkill discussion in claim 1 above].

As per claim 15:
Pugh, as modified by **Corkill**, teaches instantiating a second object to provide data regarding the plurality of dynamic behaviors [see role list object" discussion , col. 8, beginning line 30]; and, instantiating the object from the data regarding the plurality of dynamic behaviors [e.g., see Pugh "create an instance" discussion beginning col. 7, line 3; see also the Corkill discussion in claim 1 above].

As per independent claim 16:

This claim is rejected for the same reasons detailed above in the rejection of the preceding independent claims, and also for the following additional reasons:

Pugh, as modified by **Corkill**, teaches a computer-readable medium having data stored thereon representing:

- an object having a plurality of dynamic behaviors [e.g., see Pugh: "composite object" and the addition and deletion of associated role objects, as discussed beginning col. 5, lines 50-67, continued, col. 6; see also the Corkill discussion in claim 1 above] ;

- a data store to store data regarding the plurality of dynamic behaviors [e.g., see Pugh: "composite object" and its capability to include (i.e., store) associated "role objects," see discussion beginning col. 6, line 3; see list and database discussion col. 14, beginning line 54]; and,

- an application to instantiate the object from the data stored in the data store regarding the plurality of dynamic behaviors [e.g., see Corkill discussion in claim 1 above].

As per independent claim 17:
This claim is rejected for the same reasons detailed above in the rejection of the preceding independent claims, and also for the following additional reasons:

Pugh, as modified by **Corkill**, teaches a computer-readable medium having a computer program stored thereon for execution on a computer, the program performing the method comprising:

- receiving a command to instantiate an object having a plurality of dynamic behaviors; looking up data regarding the plurality of dynamic behaviors in a data store [e.g., see

Pugh "create an instance" discussion beginning col. 7, line 3 – a function call is equivalent to a command] ;

- instantiating the object from the data regarding the plurality of dynamic behaviors in the data store [e.g., see Pugh "create an instance" discussion beginning col. 7, line 3];

- changing the plurality of dynamic behaviors [e.g., see Pugh "register-role" discussion beginning col. 10, line 10] ;

- looking up data regarding the plurality of dynamic behaviors in the data store as have been changed [see role list object" discussion , col. 8, beginning line 30; see also Corkill discussion in the rejection of claim 1 above]; and,

- instantiating the object from the data regarding the plurality of dynamic behaviors as have been changed stored in the data store [e.g., see Pugh "create an instance" discussion beginning col. 7, line 3; see also the Corkill discussion in the rejection of claim 1 above].

As per independent claim 18:
This claim is rejected for the same reasons detailed above in the rejection of the preceding independent claims, and also for the following additional reasons:

Pugh, as modified by **Corkill**, teaches a computer comprising:

- a memory and a processor [inherent];

- a data store of the memory to store data regarding a plurality of dynamic behaviors of an object [e.g., see Pugh "composite object" and its capability to include (i.e., store) associated "role objects," see discussion beginning col. 6,

line 3; see list and database discussion col. 14, beginning line 54]; and,

- an application executed by the processor from the memory to instantiate the object from the data stored in the data store regarding the plurality of dynamic behaviors [e.g., see Corkill discussion as set forth in the rejection of claim 1 above].

As per claim 19:
Pugh, as modified by **Corkill**, teaches the object comprises a Component Object Model (COM) object, and the data store comprises a registry [see the rejections of claims 5 & 7 above].

As per claim 20:

Pugh, as modified by **Corkill**, teaches the object instantiates at least one of the plurality of dynamic behaviors during instantiation of the object [see Pugh "create an instance" discussion beginning col. 7, line 3; see also Corkhill event discussion page 46 with respect to creation of objects in response to events].

As per new independent claim 21:
This claim is rejected for the same reasons detailed above in the rejection of the preceding independent claims, and also for the following additional reasons:

Pugh explicitly discloses:

> *".. a composite object appears to a client of the composite object as a single object that exposes multiple interfaces"*[see col. 6, lines 65-66].
>
> *"The cluster object provides the ability to add a role interface to the composite object (thereby associating the role interface to the composite object"* [col. 4, lines 35-38].

Accordingly, when the disclosed composite object is viewed as a single object, the composite object has an associated interface that is inherently defined, as disclosed by Pugh.

As per new dependent claims 22-28:
These claims are rejected for the same reasons detailed above in the rejections of claims 2-8, respectively.

Obviousness-type double patenting Rejection:
The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington,*418 F.2d 528, 163 USPQ 644 (CCPA 1969).

"Double patenting rejection of application claims was fully justified where applicant, in course of expanding first application to disclose enough more by way of details, alternatives, and additional uses to support broad,

dominating, generic claims in later applications, has disclosed no additional invention or discovery other than that what was already claimed in patent on first application; there is significant difference between justifying broadening of claims and disclosing additional inventions." *In re Van Ornum*, 214 USPQ 761 (CCPA 1982).

Claims 1-28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of co-pending application 09/200,674, now U.S. Patent 6,304,879 (Sobeski et al.).

Although the conflicting claims are not identical, they are not patentably distinct from each other because of corresponding language that recites many of the same elements and functions claimed in the previously patented invention, e.g., "dynamic property" (i.e., "dynamic behaviors"), "data store" (i.e,., "temporary store") ,"received command" (i.e., "receiving a command"), "change data command" (i.e., "changing the plurality of dynamic behaviors"), etc.

The claimed differences would be obvious to a programmer of ordinary skill because the instant claims are merely broader and/or alternate variations of the claims recited in the co-pending case.

For example, independent claim 1 of the instant case more broadly and/or alternately claims:

"A system comprising: an object having a plurality of dynamic behaviors; a data store to store data regarding the plurality of dynamic behaviors; and, an application to instantiate the object from the data stored in the data store regarding the plurality of dynamic behaviors, wherein the object instantiates at least one of the plurality of dynamic behaviors."

In contrast, claim 1 of the co-pending case (U.S. Patent 6,304,879) more narrowly and/or alternately claims:

" *A system comprising:*

a container object comprising

a data object having at least one static property,

a data cache object through which all access to the at least one static property of the data object is made and to temporarily store at least one dynamic property for the data object,

a controller object through which all access to the data cache object is made via at least one of messages and events,

at least one internal object to access the at least one static property and the at least one dynamic property; and

at least one external object to access the at least one static property and the at least one dynamic property, wherein the external object is external to the container object, and wherein the container object, the data object, the data cache object, the controller object, the at least one internal object, and the at least one external object all comprise respective encapsulated data and a respective method for accessing the respective encapsulated data in an object-oriented computing environment.

Because the instant claims merely eliminate and/or alternately claim limitations from the set of elements and functions claimed in the co-pending case, such modifications would be readily apparent to a programmer of ordinary skill.

Terminal Disclaimer

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer
signed by the assignee must fully comply with 37 CFR 3.73(b).

For post GATT applications, (i.e., applications filed after June 8,

1995), the rule § 1.321 (4) (c) (3) requires a provision that must be included. The following requirement is UNCHANGED by GATT and therefore a terminal disclaimer is required for the instant application, i.e., *"shall be enforceable only for and during such period that said patent is commonly owned with the application or patent which formed the basis for the rejection."*

§ 1.321 Statutory disclaimers, including terminal disclaimers.

(a) A patentee owning the whole or any sectional interest in a patent may disclaim any complete claim or claims in a patent. In like manner any patentee may disclaim or dedicate to the public the entire term, or any terminal part of the term, of the patent granted. Such disclaimer is binding upon the grantee and its successors or assigns. A notice of the disclaimer is published in the Official Gazette and attached to the printed copies of the specification. The disclaimer, to be recorded in the Patent and Trademark Office, must:

(1) Be signed by the patentee, or an attorney or agent of record;

(2) Identify the patent and complete claim or claims, or term being disclaimed. A disclaimer which is not a disclaimer of a complete claim or claims, or term will be refused recordation;

(3) State the present extent of patentee's ownership interest in the patent; and

(4) Be accompanied by the fee set forth in § 1.20(d).

(b) An applicant or assignee may disclaim or dedicate to the public the entire term, or any terminal part of the term, of a patent to be granted. Such terminal disclaimer is binding upon the grantee and its successors or assigns. The terminal disclaimer, to be recorded in the Patent and Trademark Office, must:

(1) Be signed:

(i) By the applicant, or

(ii) If there is an assignee of record of an undivided part interest, by

the applicant and such assignee, or

(iii) If there is an assignee of record of the entire interest, by such assignee, or

(iv) By an attorney or agent of record;

(2) Specify the portion of the term of the patent being disclaimed;

(3) State the present extent of applicant's or assignee's ownership interest in the patent to be granted; and

(4) Be accompanied by the fee set forth in § 1.20(d).

(c) A terminal disclaimer, when filed to obviate a judicially created double patenting rejection in a patent application or in a reexamination proceeding, must:

(1) Comply with the provisions of paragraphs (b)(2) through (b)(4) of this section;

(2) Be signed in accordance with paragraph (b)(1) of this section if filed in a patent application or in accordance with paragraph (a)(1) of this section if filed in a reexamination proceeding; and

(3) Include a provision that any patent granted on that application or any patent subject to the reexamination proceeding **shall be enforceable only for and during such period that said patent is commonly owned with the application or patent which formed the basis for the rejection.**

[47 FR 41281, Sept. 17, 1982, effective Oct. 1, 1982; revised, 58 FR 54504, Oct. 22, 1993, effective Jan. 3, 1994; para. (c) revised, 61 FR 42790, Aug. 19, 1996, effective Sept. 23, 1996]

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in **37 CFR 1.136(a)**.
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to **37 CFR 1.136(a)** will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

How to Contact the Examiner:

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **St. John Courtenay III** whose voice telephone number is **(703) 308-5217.** A voice mail service is also available at this number. Normal Flex work schedule: M – F 7:30 AM - 4:00 PM

- **All responses sent by U.S. Mail should be mailed to:**

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PTO FAX NUMBERS:

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- **BEFORE-FINAL OFFICIAL faxes must be signed and sent to: (703) 746-7239.**

- Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: (703) 305-3900.**

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The Manual of Patent Examining Procedure (MPEP) is available online at:
http://www.uspto.gov/web/offices/pac/mpep/index.html

ST. JOHN COURTENAY III
PRIMARY EXAMINER